

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of thermal cycle applied for a combustion engine comprising:
introducing intake products into a space without compression in an intake
stroke;
igniting the intake products in a power stroke to produce combustive products;
and,
exhausting the combustive products in an exhaust stroke.
2. The method of Claim 1, wherein the intake products are introduced at about
ambient pressure.
3. The method of Claim 1, wherein the intake products are introduced at greater than
ambient pressure.
4. The method of Claim 1, wherein the power stroke volume is about equal to the
intake chamber volume.
5. The method of Claim 1, wherein the power stroke volume is greater than the
intake chamber volume.
6. The method of Claim 1, wherein the power stroke volume is about equal to or
greater than the expansion possible from the fuel air mix used.
7. The method of Claim 1, wherein the exhaust stroke pressure is about ambient
pressure.
8. The method of Claim 1, wherein the exhaust stroke pressure is above ambient
pressure.
9. The method of Claim 1, wherein the thermal cycle is implemented by an internal
combustion engine.
10. The method of Claim 1, wherein the thermal cycle is implemented by an external
combustion engine.

11. The method of Claim 1, wherein the thermal cycle is implemented by a shaped charge or detonation cycle combustion engine.
12. A method of thermal cycle applied for a combustion engine comprising:
introducing intake products at approximately ambient pressure into a space
5 without compression in an intake stroke;
producing ignition products in a power stroke; and
exhausting the ignition products in an exhaust stroke.
13. The method of Claim 12, wherein the volume of the power stroke is variable.
14. The method of Claim 13, wherein the ignition products are vented at pressures
10 inversely proportional to the volume of the power stroke.
15. The method of Claim 14 wherein the ignition products are vented at approximately ambient pressure.
16. The method of Claim 14, wherein the ignition products are vented at pressure exceeding the ambient pressure of the intake products.
- 15 17. A method of thermal cycle applied for a combustion engine comprising:
introducing intake products at pressures exceeding ambient pressure into a
space without compression in an intake stroke;
producing ignition products in a power stroke; and
exhausting the ignition products in an exhaust stroke.
- 20 18. The method of Claim 17, wherein the volume of the power stroke is variable.
19. The method of Claim 17, wherein the ignition products are vented at pressures inversely proportional to the volume of the power stroke.
20. The method of Claim 17 wherein the ignition products are vented at approximately ambient pressure.